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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,440	04/15/2004	Kevin Lin	4425-310	6295

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EXAMINER

PHAN, MAN U

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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09/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/824,440	Applicant(s) LIN ET AL.	
	Examiner Man Phan	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 12-15 is/are rejected.
- 7) ☒ Claim(s) 2-3, 5-11, 16-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The application of Lin et al. for a "Controlling method and device for data transmission" filed 04/15/2004 has been examined. This application claims priority from Provisional application 60/495,116 filed August 15, 2003. Claim 1-17 are pending in the application.

2. The applicant should use this period for response to thoroughly and very closely proof read and review the whole of the application for correct correlation between reference numerals in the textual portion of the Specification and Drawings along with any minor spelling errors, general typographical errors, accuracy, assurance of proper use for Trademarks TM, and other legal symbols @, where required, and clarity of meaning in the Specification, Drawings, and specifically the claims (i.e., provide proper antecedent basis for "the" and "said" within each claim). Minor typographical errors could render a Patent unenforceable and so the applicant is strongly encouraged to aid in this endeavor.

Drawings

3. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 4 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Starke et al. (US#6,643,763) in view of Check et al. (US#6,990,556).

With respect to claims 1, 4 and 12, the references disclose a controlling method and device for data transmission in the dual buffer architecture, according to the essential features of the claims. Starke et al. (US#6,643,763) provide methods of transferring data between a first processing engine and a second processing engine. The method includes: establishing a register pipe-between the first processing engine and the second processing engine, the register pipe may

Art Unit: 2616

include at least one first register in the first processing engine and at least one second register in the second processing engine; and transferring data between the first processing engine and the second processing engine using the register pipe, wherein data is transferred between the first and second processing engines without passing through main memory of the multiprocessor computer system to which the first processing engine and second processing engine belong (Fig. 1; See the Abstract and Col. 2, lines 32 plus).

In the same field of endeavor, Check et al. (US#6,990,556) disclose in Fig. 3 a diagrammatic illustrated a method and system for accessing the same cache doubleword for multiple simultaneous requests where the cache has a plurality of cache interleaves with an address sliced directory. The processor includes cache storage having an address sliced directory lookup structure. A same doubleword detection unit receives a first instruction including a plurality of first instruction fields on a first pipe and a second instruction including a plurality of second instruction fields on a second pipe. The same doubleword detection unit generates a same doubleword signal in response to the first instruction fields and the second instruction fields. The cache storage reads data from a single doubleword in the cache storage and simultaneously provides the doubleword to the first pipe and the second pipe in response to the same doubleword signal (See also Fig. 4; Col. 1, lines 59 plus and Col. 3, lines 41 plus).

Regarding claims 13-14, It's noted that the optoelectronic system comprises a VCD player, DVD player, and so on are well known in the art. Optoelectronic memories such as CDs (Compact Disks), DVDs (Digital Versatile Disks), holograms or three-dimensional barcodes can be used as electronic memories at least for the ROM.

Regarding claim 15, the use of a channel codec for performing channel encoding and decoding functions are also well known in the art of data transmission.

One skilled in the art would have recognized the need for effectively and efficiently facilitating the data transmission in dual buffer architecture, and would have applied Check's novel use of the processor for providing simultaneous access to the same data for a plurality of requests into Starke's teaching of the structure for implementing a register pipe between processing engines of a multiprocessor computing system. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Check's system and method for simultaneous access of the same doubleword in cache storage into Starke's register pipe for multi-processing engine environment with the motivation being to provide a controlling method and device for data transmission.

Allowable Subject Matter

7. Claims 2-3, 5-11, 16-17 are objected to as being dependent upon the rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

8. The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest wherein parts of data processing procedures of the first transmission channel during the interval comprising: caching and decoding data in the first transmission channel while the data transmitted from the first transmission channel to the system bus; encoding and storing data to a storage media while the data transmitted from the system bus to the first transmission channel; utilizing the first

Art Unit: 2616

transmission channel for caching a first source data when a first command issued by the command processor is read/write; and utilizing the second transmission channel for caching a second source data when a second command issued by the command processor is write/read, wherein the second command performed after the first command; wherein if the first processing procedures comprising a data decoding, the pair of pipe indices comprising: a write pipe index for indicating amount of cached data in a corresponding transmission channel with the first processing procedures; a decode pipe index for indicating amount of decoded data; and a host-pipe sector data send index for indicating a mount of data sent from the corresponding transmission channel to a command processor; wherein if the first processing procedures comprising a data encoding, the pair of pipe indices comprising: a host-pipe sector data get index for indicating amount of data sent from a command processor to corresponding transmission channel; an encode pipe index for indicating amount of encoded data; and a record pipe index for indicating amount of encoded data sent from corresponding transmission channel to a storage medium, as specifically recited in the claims.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2616

The Hu et al. (US#2005/0027966) is cited to show the device and method for digital signal processor code downloading.

The Saito (US#4644,466) is cited to show the pipeline processor.

The Chan et al. (US#6,202,128) is cited to show the Method and system for pre-fetch cache interrogation using snoop port.

The Liu (US#5,805,855) is cited to show the Data cache array having multiple content addressable fields per cache line.

The Liu et al. (US#5,640,534) is cited to show the Method and system for concurrent access in a data cache array utilizing multiple match line selection paths.

The Bratt et al. (US#5,740,402) is cited to show the Conflict resolution in interleaved memory systems.

The Alpert et al. (US#5,559,986) is cited to show the Interleaved cache for multiple accesses per clock cycle in a microprocessor.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

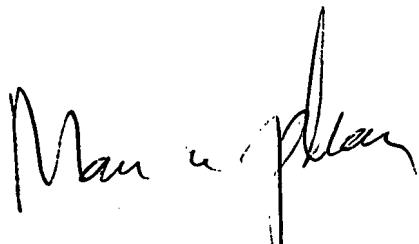
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Art Unit: 2616

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

09/11/2007.

A handwritten signature in black ink, appearing to read "Man U. Phan", written in a cursive style.

MAN U. PHAN
PRIMARY EXAMINER